# THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants:

Douglas P. Brown et al.

Art Unit:

2166

Serial No.:

09/977,038

8 8 Examiner:

Isaac M. Woo

Filed:

October 12, 2001

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For:

Index Selection in a Database

System

Atty. Dkt. No.:

10150 (NCR.0063US)

## Mail Stop AF

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

# PRE-APPEAL BRIEF REQUEST FOR REVIEW

#### Dear Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

As agreed to between the undersigned and Examiner Hosain Alam (see attached Summary of Telephonic Interview), the Amendment after final (mailed January 31, 2006) will be entered for purposes of appeal. (The telephonic interview was necessary because the Advisory Action of February 21, 2006 did not indicate whether or not the Amendment after final would be entered for purposes of appeal).

#### REJECTION UNDER 35 U.S.C. § 101

Although the Office Action of December 1, 2005 rejected claim 7 under § 101, the language quoted actually referred to language of claim 1, not claim 7. Claims 1 and 7 now recite "at least one processor," which was added in the Amendment after final.

In the telephonic interview of March 28, 2006, Examiner Alam agreed that the § 101 rejection of claims 1 and 7 has been overcome.

Date of Deposit: Sml 3

I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

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## **CLAIM OBJECTION**

Examiner Alam indicated in the telephonic interview of February 28, 2006 that the objection of claim 1 has been overcome. See also arguments presented in the Amendment after final (mailed January 31, 2006).

# REJECTION UNDER 35 U.S.C. § 102

It is respectfully submitted that claim 1 is not anticipated by Agrawal. Agrawal does not disclose a test system that has an emulation module to receive environment information of a database system separate from the test system, where the emulation module is to emulate an environment of the database system based on the environment information. As clearly recited in claim 1, this emulation module is part of the test system that is separate from the database system.

There is no such emulation module in a test system separate from a database system disclosed in Agrawal. The Office Action cited element 240 of Agrawal (depicted in Fig. 2 of Agrawal) as being the emulation module of claim 1. Note that element 240 of Agrawal is the configuration simulation and cost estimation module that is part of the optimizer of the database server 245 in Fig. 2 of Agrawal. Agrawal, 7:48-51. In other words, the module 240 is actually part of the database server (or database system) in Fig. 2 of Agrawal. Therefore, the module 240 cannot be considered the emulation module of claim 1, which must be in a test system that is separate from the database system. In Agrawal, the module 240 is actually part of the database system.

Agrawal further discloses a candidate selection module 225 (also shown in Fig. 2 of Agrawal) that receives cost information regarding candidates relative to the workload and the server from the configuration and simulation cost estimation module 240. Agrawal, 7:51-53. This candidate selection module 225 is part of a group of components identified generally as 210 in Fig. 2 of Agrawal. However, there is no indication in Agrawal that any of the components indicated generally as 210 performs *the following task:* emulate an environment of the database system based on the received environment information of the database system. There is absolutely no indication anywhere within Agrawal that any emulation is being performed by the components in 210 in Fig. 2 of Agrawal.

It is therefore clear that Agrawal thus does not disclose the emulation module of claim 1. Agrawal also fails to disclose a first module executable in the emulated environment, and a second module executable in the emulated environment.

In view of the foregoing, it is respectfully submitted that claim 1 is not anticipated by Agrawal.

Independent claim 7 is also not anticipated by Agrawal. Claim 7 recites a first module to eliminate one or more candidate indexes based on one or more predetermined criteria, where the one or more predetermined criteria comprises a threshold change rate, and where the first module eliminates one or more candidate indexes having a change rate exceeding the threshold change rate.

In the rejection of claim 7, the Office Action cited column 10, lines 34-67, and column 15, lines 50-58, of Agrawal as disclosing the "threshold change rate." 12/1/2005 Office Action at 7. The cited passage in column 10 refers to a predetermined cost threshold (10:63) that is used for pruning or eliminating "uninteresting" table-subsets, which are subsets of tables referenced in a query of a workload (8:45-46). The cost threshold identified in the column 10 passage is not a threshold change rate. Moreover, eliminating subsets of tables referenced by a query of a workload is *not* the same as eliminating one or more candidate *indexes* based on the threshold change rate.

The cited column 15 passage of Agrawal refers to a fraction f of the total storage to be allocated to indexes (15:44-45). The fraction of total storage for allocation to indexes is not a threshold change rate as recited in claim 7. Moreover, there is no teaching in column 15 of Agrawal that this fraction of total storage is used for eliminating candidate indexes.

In view of the foregoing, it is respectfully submitted that claim 7 is not anticipated by Agrawal.

Independent claim 40 is also not anticipated by Agrawal, which does not disclose eliminating candidate indexes that are changed with updates at a rate greater than a predetermined change rate threshold. Also, there is no teaching Agrawal of eliminating a candidate index that is a subset of another candidate index.

Dependent claims are allowable for at least the same reasons as corresponding independent claims.

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In view of the foregoing, withdrawal of the final rejections and allowance of all pending claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 14-0225 (10150).

Respectfully submitted,

Date: Apr 3, 2006

Dan C. Hu

Registration No. 40,025

TROP, PRUNER & HU, P.C. 8554 Katy Freeway, Suite 100

Houston, TX 77024

Telephone: (713) 468-8880 Facsimile: (713) 468-8883